REMARKS

Claims 1, 24 and 25 have been amended to state that the bonded structure has a dynamic peel strength greater than 215 grams per 25 millimeters. This amendment is suppported by the Examples, and is particularly supported by:

Table 2 (all four t-APAO bonded samples)

Table 3 (four out of five t-APAO bonded samples)

Table 4 (three out of four t-APAO bonded samples)

Table 5 (six out of seven t-APAO bonded structures)

As explained in the specification, the high dynamic peel strength is achieved using a unique selection of process conditions for applying the adhesive composition and bonding the layers. The tackified amorphous poly-alpha olefin (t-APAO) adhesive is applied to one of the substrates at a temperature of about 170°C or less, and the substrates are then joined together (page 4, lines 3-7). It has been discussed that lower application temperatures for the t-APAO result in improved bond strength compared to neat APAO. This discovery is counter-intuitive to standard adhesive application processes, wherein better bond strength is typically achieved by increasing the application temperature. Because the t-APAO can be applied at lower temperatures, using low add-on levels, there is a reduced likelihood of creating pitting or burn-through in one or both substrates (page 16, line 25 – page 17, line 5). The ingredients of the adhesive composition are selected to provide melt processability at about 170°C or less (page 24, line 26 – page 25, line 2).

a) Claim Rejection Based On Suzuki

The rejection of Claims 1, 4-25 and 32-37 under 35 U.S.C. § 102(b) as anticipated by, or under 35 U.S.C. § 103(a) as obvious over U.S. Patent 5,763,333 ("Suzuki") is respectfully traversed. In the Office Action, the Examiner states:

> Suzuki does not specifically disclose a peel strength and no burn-through visual defects. However, it appears that the bonded structure of Suzuki meets all the structural limitations as set forth in the claims . . . it is the examiner's position that the peel strength and no burn-through visual defects would be inherently present . . . (Office Action, page 3).

To the contrary, Suzuki discloses adhesive peel strengths of various samples. All of the adhesive peel strengths are below 215 grams per 25 mm and all but one of the dynamic peel strengths are substantially lower (See Table 3). As explained above, to achieve the dynamic peel strength recited in Applicants' claims requires a combination of process conditions and structural limitations. Suzuki was not able to achieve the claimed dynamic peel strengths.

Moreover, the highest peel strengths achieved by Suzuki required the use of a heat embossing step (Table 3). Heat embossing is not contemplated in Applicants' specification but would likely increase the amount of burn-through due to the pressure and temperature associated with this step. In summary, Suzuki provides no teaching or motivation to minimize the amount of burn-through, or to produce a laminate having a dynamic peel strength greater than 215 grams per 25 mm.

As explained above, Applicants achieve the claimed high dynamic peel strength by applying the adhesive at 170°C or less, and achieve better adhesion at lower temperatures. Suzuki applies the adhesive at 170°C (the upper limit disclosed in Applicants' specification) but also applies hot air at 190°C under pressure (Table 3). This combination may cause the bonded structure to experience excessive temperature, preventing the adhesion from reaching the values in Applicants' claims.

Accordingly, this claim rejection should be withdrawn.

b) Claim Rejection Based On McCormack In View Of Karandinos

The rejection of Claims 1, 4-6, 9-25 and 32-37 under 35 U.S.C. § 103(a) as obvious over U.S. Patent 5,843,057 ("McCormack") in view of U.S. Patent 6,627,723 ("Karandinos") is respectfully traversed. The Examiner states:

> [I]t would have been obvious . . . to use an adhesive composition as described by Karandinos for bonding the film and nonwoven web of McCormack motivated by the desire to achieve an adhesive bond of sufficient strength between the film and nonwoven web . . . McCormack as modified by Karandinos does not specifically disclose a peel strength and no burn-through visual defects. However, it appears that the bonded structure of McCormack as modified by Karandinos meets all the structural limitations as set forth in the claims . . . it is the examiner's position

> that the peel strength and no burn-through visual defects would be inherently present . . . (Office Action, pages 4-5).

As explained above, achieving the claimed dynamic peel strength requires a combination of process conditions and structural limitations. In particular, the claimed dynamic peel strengths are obtained when the adhesive is applied at about 170°C or less.

McCormack, by contrast, discloses heating an adhesive to about 177°C and then applying it to a film at an air temperature of about 193°C or 221°C before bonding the film to the nonwoven layer (Col. 17, line 57 – Col. 18, line 5, Col. 19, lines 17-31). The disclosed adhesion is relatively lower, ranging down to about 20 grams or more (Col. 11, lines 47-55). McCormack does not disclose a dynamic peel strength greater than 215 grams per 25 millimeters, and does not disclose process conditions that lead to that result.

Karandinos discloses amorphous alpha-olefin interpolymers which can be combined with tackifiers and used as adhesives. Karandinos does not disclose process conditions for applying the adhesive to a substrate. The mere substitution of the Karandinos adhesive in the structure of McCormack would not inherently result in the claimed bonded structure having a dynamic peel strength greater than 215 grams per 25 millimeter. As explained above, McCormack does not disclose applying the adhesive at temperatures disclosed in Applicants' specification for achieving the claimed dynamic peel strength. Also, McCormack seeks adhesion of only 20 grams or more, which is substantially less than the claimed minimum.

Accordingly, this rejection should be withdrawn.

c) Claim Rejection Based On McCormack In View Of Karandinos And Suzuki

The rejection of Claims 7 and 8 under 35 U.S.C. § 103 (a) as obvious over McCormack in view of Karandinos and Suzuki is respectfully traversed. These claims depend from Claim 1 and are patentable for at least the same reasons explained above. None of the three references discloses a bonded structure including two substrates bonded with a t-APAO adhesive and having a dynamic peel strength greater than 215 grams per 25 millimeters. This rejection should be withdrawn.

d) Claim Rejection Based On Morman In View Of Karandinos

The rejection of Claims 1, 4-6, 9-25 and 32-37 under 35 U.S.C. § 103(a) as obvious over U.S. Patent 6,632,212 ("Morman") in view of Karandinos is respectfully traversed. The Examiner states:

> [I]t would have been obvious . . . to use an adhesive composition as described by Karandinos for bonding the film and nonwoven web of Morman motivated by the desire to achieve an adhesive bond of sufficient strength between the film and nonwoven web . . . Morman as modified by Karandinos does not specifically disclose a peel strength and no burn-through visual defects. However, it appears that the bonded structure of Morman as modified by Karandinos meets all the structural limitations as set forth in the claims . . . it is the examiner's position that the peel strength and no burn-through visual defects would be inherently present . . . (Office Action, pages 6-7).

As explained above, achieving the claimed dynamic peel strength requires a combination of process conditions and structural limitations. In particular, the claimed dynamic peel strengths are obtained when the adhesive is applied at about 170°C or less.

Morman discloses an APAO polymer as an outer layer component in a coextruded film (Col. 11, lines 22-43). While the film may subsequently be laminated to a nonwoven web, there is no disclosure of a bonding temperature. However, the APAO is not necessarily used as an adhesive layer. Instead, a separate adhesive can be interposed between the coextruded film and the nonwoven web (Col. 12, lines 29-56). Morman does not disclose a dynamic peel strength, and does not disclose bonding conditions that would inherently result in a dynamic peel strength greater than 215 grams per 25 mm.

Karandinos discloses amorphous poly-alpha olefin interpolymers which can be combined with tackifiers and used with adhesives. Karandinos does not disclose process conditions for applying the adhesive to a substrate. The mere substitution of the Karandinos adhesive in the structure of McCormack would not inherently result in the claimed bonded structure having a dynamic peel strength greater than 215 grams per 25 millimeters. As explained above, Morman does not disclose applying an adhesive at temperatures described in Applicants' specification for obtaining the claimed dynamic peel strength.

Accordingly, this rejection should be withdrawn.

e) Claim Rejection Based On Morman In View Of Karandinos And Suzuki

The rejection of Claims 7 and 8 under 35 U.S.C. § 103(a) as obvious over Morman in view of Karandinos and Suzuki is respectfully traversed. These claims depend from Claim 1 and are patentable for at least the same reasons, explained above. None of the three references discloses a bonded structure including two substrates bonded with a t-APAO adhesive and having a dynamic peel strength greater than 215 grams per 25 millimeters. This rejection should be withdrawn.

f) Conclusion

Applicants believe that the claims, as presented, are in condition for allowance. If the Examiner detects any unresolved issues, then Applicants' attorney requests a telephone call from the Examiner, and a telephone interview.

Respectfully submitted,

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